

Species *Planktophila tarnitensis*

Etymology

[tar.ni.ten'sis] **N.L. fem. adj.** *tarnitensis*, of Tarnita, referring to Lake Tarnița, Romania, the place from which the representative strain was isolated

Nomenclatural type

[Genome sc|0004098](#) ^{Is}

Description

Etymology. It is named after Lake Tarnița, Romania, the place from which the representative strain was isolated.

Brief description. *Planktophila tarnitensis* TarE-7 (ENA accession number GCA_965267845) was isolated from the epilimnion (5m depth) of the mesotrophic Lake Tarnița, Romania (date: 2021-07-28) and it is the only isolated representative of the species. It has a complete circular genome of 1,347,384 bp, a GC content of 48.1% and a coding density of 95.3%. The closest isolated species is *Planktophila vernalis* MMS-IIB-142, with which it shares an average nucleotide identity of 92.3%. It lacks the oxidative part of the pentose phosphate pathway, as well as the capacity to synthesize asparagine. For *Planktophila*, it encodes a very low number of carbohydrate active enzymes (26 total enzymes belonging to 15 different families). It encodes one rRNA operon and 40 tRNA genes; additionally, it has both actinorhodopsin and heliorhodopsin, and the capacity for retinal biosynthesis. Recruitment analysis indicates that this species is not very abundant and widespread, but it is present in several freshwater environments, including Lake Paradise (Canada), and the German lakes Breiter Luzin, Stechlin and Tiefwaren. The Current GTDB classification (r220) is d__Bacteria; p__Actinomycetota; c__Actinomycetia; o__Nanopelagiales; f__Nanopelagicaceae; g__Planktophila; s__.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Nanopelagiales* » *Nanopelagicaceae* » *Planktophila* » *Planktophila tarnitensis*

References

Effective publication: Chiriac et al., 2025 [1]

Registry URL

<https://seqco.de/i:51482>

References

1. Chiriac et al. (2025). Ecological success in freshwater lakes: insights from novel cultivated lineages of the abundant Nanopelagiales order. *Microbiome*. DOI: [10.1186/s40168-025-02272-x](https://doi.org/10.1186/s40168-025-02272-x)